What Is Claimed Is:

1. A sensor (S) for measuring the viscosity of a liquid, including at least one piezoelectric component (1), preferably designed as a resonator, and at least one first starting electrode (7) and one second starting electrode (3), preferably at least the first starting electrode (7) being situated on a sensitive surface (8) of the sensor (S),
wherein at least one heating electrode (2) is provided for heating the liquid to be measured.

2. The sensor (S) as recited in Claim 1,
wherein the at least one heating electrode (2) is situated on or next to the sensitive surface (8) of the sensor (S).

3. The sensor (S) as recited in Claim 1 or 2,
wherein the at least one heating electrode (2) is designed in one piece with the first starting electrode (7).

4. The sensor (S) as recited in one of Claims 1 through 3, wherein the at least one heating electrode (2) spans a surface area (9) having a central area (17), preferably a center (18), in particular a center point (19), and has an approximately uniform temperature distribution over the surface area (9) in the operating temperature range.

5. The sensor (S) as recited in one of Claims 1 through 4, wherein the at least one heating electrode (2) has a meandering shape.

6. The sensor (S) as recited in one of Claims 1 through 5, wherein the at least one heating electrode (2) has at least two areas of different resistance per unit of length.

7. The sensor (S) as recited in one of Claims 1 through 6, wherein the at least one heating electrode (2) has at least two areas of different cross section.

8. The sensor (S) as recited in Claim 6 or 7, wherein the resistance per unit of length of the at least one heating electrode (2) varies as a function of its distance (E) from the central area (17), preferably from the center (18), in particular from the center point (19).

9. The sensor (S) as recited in one of Claims 6 through 8, wherein the resistance per unit of length of the at least one heating electrode (2) increases from the central area (17), preferably from the center (18), in particular from the center point (19), toward an edge area (12).

10. The sensor (S) as recited in one of Claims 1 through 9, wherein a temperature measuring sensor (26) is provided.

11. The sensor (S) as recited in one of Claims 1 through 10, wherein the temperature measuring sensor (26) includes the at least one heating electrode (2).

12. The sensor (S) as recited in one of Claims 1 through 11, wherein at least one of the starting electrodes (3, 7) and/or the at least one heating electrode (2) is/are coated with an insulation layer.

13. A device for measuring the viscosity of liquids, wherein a sensor (S) as recited in one of Claims 1 through 12 is provided.

14. A method for measuring the viscosity of liquids in which at least one sensitive surface (8) of a sensor (S) is brought into contact with the liquid to be measured, the sensor (1) being induced to oscillate by applying an

alternating voltage, and a viscosity value of the liquid is ascertained from measured values of the electrical parameters, preferably voltage and current, wherein the liquid is heated by a heating electrode (2) in the area of the sensitive surface (8).

15. The method as recited in Claim 14, wherein the temperature of the liquid is measured.

16. The method as recited in Claim 14 or 15, wherein, upon reaching a predefinable temperature, the heating of the liquid is interrupted, the electrical parameters are measured, and the viscosity value of the liquid is ascertained.

17. The method as recited in one of Claims 14 through 16, wherein the viscosity values of the liquid are ascertained for a plurality of predefinable temperatures.

18. The method as recited in Claim 17, wherein a curve of the liquid's viscosity plotted against the temperature is formed from the individual viscosity values of the liquid at the predefinable temperatures.